

OCCURRENCE OF EXTREMELY SMALL OVIGEROUS  
CRABS (*CALLINECTES* SP.) IN COASTAL  
NORTH CAROLINA

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The smallest adult female blue crab (*Callinectes sapidus* Rathbun) reported in the literature was 80 mm wide and 35 mm long (Hay and Shore 1918). On August 6, 1958 two smaller adult female crabs (*Callinectes* sp.), in an ovigerous condition, were caught by a shrimp trawl approximately one mile south of the entrance to Silver Lake, Ocracoke Island, North Carolina (Table I). They were taken over a sand, mud, and seaweed bottom in water ranging from 4 to 15 feet in depth. Surface water temperature was 26.8° C and surface salinity 21 ‰.

TABLE I. Measurements of small ovigerous crabs, *Callinectes sapidus*? taken in 1958

| Measurement                     | Crabs caught off<br>Ocracoke Island |      | Crab caught off<br>Radio Island |
|---------------------------------|-------------------------------------|------|---------------------------------|
|                                 | A                                   | B    |                                 |
| Length of carapace mm           | 23.3                                | 24.1 | 22.2                            |
| Width of carapace mm            | 55.0                                | 55.0 | 52.3                            |
| Fronto-orbital width<br>mm..... | 19.4                                | 20.8 | 19.1                            |

The frontal outline and other external characteristics of these adult crabs, except for their small size, resemble *Callinectes sapidus* Rathbun. W. A. Van Engel of the Virginia Fisheries Laboratory, and F. A. Chace, Jr. of the United States National Museum examined these crabs, and both agree that they appear to be *C. sapidus* Rathbun. D. G. Cargo, Maryland Department of Research and Education, also examined the crabs and stated that "... of the presently described species (Rathbun 1930), these most closely correspond to the published descriptions of *Callinectes sapidus*." Mr. Cargo, who is familiar with measurements taken on 14,000 adult female blue crabs—the smallest of which was 36 mm in length, further stated "... it is difficult to reconcile that an adult of this species could develop at a length of 24 mm."

Another extremely small ovigerous crab was collected on October 23, 1958 by C. M. and T. G. Roberts of the U. S. Radiobiological Laboratory, Beaufort, North Carolina (Table I). This crab, caught in a haul seine on the eastward shore of Radio Island, Morehead City, North Carolina, also resembled *C. sapidus* and was identical in frontal outline and other characteristics with the 2 caught off Ocracoke Island.

The measurements of the 3 crabs reported herein were made in a manner prescribed by Rathbun (1930). Rathbun (1896), in describing the blue crab, stated that adult females normally vary from 5 to 7 inches (127 to 178 millimeters) in width.

If the 3 specimens of ovigerous crabs described above are *C. sapidus* Rathbun, which is the critical opinion of Messrs. Van Engle, Chace, and Cargo, then they are the smallest adult females of this species so reported. It is not known whether these dwarf forms of *C. sapidus* normally occur in the areas in which they were collected, or whether they are the result of genetical or environmental factors influencing growth and thereby causing dwarfism.

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